## C L A I M S

1. Process to prepare a base oil having a viscosity index of between 80 and 140 starting from a distillate or a de-asphalted oil by
(a) contacting the feedstock in the presence of hydrogen with a sulphided hydrodesulphurisation catalyst comprising nickel and tungsten on an acid amorphous silica-alumina carrier and
(b) performing a pour point reducing step on the effluent of step (a) to obtain the base oil.

2. Process according to claim 1, wherein the sulphided hydrodesulphurisation catalyst has a hydrodesulphurisation activity of higher than 30%, wherein the hydrodesulphurisation activity is expressed as the yield in weight percentage of $C_4$-hydrocarbon cracking products when thiophene is contacted with the catalyst under standard hydrodesulphurisation conditions, wherein the standard conditions consist of contacting a hydrogen-thiophene mixture with 200 mg of a 30-80 mesh catalyst at 1 bar and 350 °C, wherein the hydrogen rate is 54 ml/min and the thiophene concentration is 6 vol% in the mixture.

3. Process according to claim 2, wherein the hydrodesulphurisation activity of the catalyst is lower than 40%.

4. Process according to any one of claims 1-3, wherein the hydrodesulphurisation catalyst is obtained in a process wherein nickel and tungsten where impregnated on the acid amorphous silica-alumina carrier in the presence of a chelating agent.

5. Process according to any one of claims 1-4, wherein the alumina content of the hydrodesulphurisation catalyst

is between 10 and 60 wt% as calculated on the carrier alone.

6. Process according to any one of claims 1-5, wherein the silica-alumina carrier has an n-heptane cracking test value of between 310 and 360 °C, wherein the cracking test value is obtained by measuring the temperature at which 40 wt% of n-heptane is converted when contacted, under standard test conditions, with a catalyst consisting of said carrier and 0.4 wt% platinum.

7. Process according to claim 6, wherein the silica-alumina carrier has an n-heptane cracking test value of between 320 and 350 °C.

8. Process according to any one of claims 1-7, wherein the catalyst comprises between 2-10 wt% nickel and between 5-30 wt% tungsten.

9. Process according to any one of claims 1-8, wherein the surface area of the hydrodesulphurisation catalyst is between 200 and 300 $m^2/g$.

10. Process according to any one of claims 1-9, wherein the total pore volume of the hydrodesulphurisation catalyst is above 0.4 ml/g.

11. Process according to any one of claims 1-10, wherein between 5 and 40 volume percent of the total pore volume of the hydrodesulphurisation catalyst is present as pores having a pore diameter of more than 350 Å.

12. Process according to any one of claims 1-11, wherein the feedstock in step (a) contains more than 700 ppm sulphur.

13. Process according to any one of claims 1-14, wherein the feed to step (a) is first subjected to a hydrodesulphurisation step prior using the feed in step (a) when preparing a base oil having a viscosity index of greater than 120.

14. Process according to any one of claims 1-13, wherein the catalyst in step (a) comprises between 0.1 and 8 wt% of a molecular sieve.

15. Process according to claim 14, wherein the molecular sieve is zeolite Y, ultrastable zeolite Y, ZSM-12, zeolite beta or mordenite molecular sieve.

16. Process according to any one of claims 1-15, wherein step (b) is performed by means of solvent dewaxing.

17. Process according to any one of claims 1-15, wherein step (b) is performed by means of catalytic dewaxing.

18. Process according to claim 17, wherein the dewaxing catalyst is a silica bound and dealuminated Pt/ZSM-12, silica bound and dealuminated Pt/ZSM-22 or silica bound and dealuminated Pt/ZSM-23.

19. Process according to claim 18, wherein the dewaxing catalyst is a silica bound and dealuminated Pt/ZSM-12.